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From the desk of a Specialist Physician

Iron Deficiency: The Missed Diagnosis

One in three new mothers leaves the maternity ward anaemic. Up to eight in ten pregnant women in Africa don't have enough iron. Millions live with unexplained fatique, anxiety and depression – without realizing that iron deficiency is the hidden cause.

You don't need anemia to have iron deficiency. Treat the patient, not just the hemoglobin.

Iron deficiency is not just a hematology issue — it's a hidden epidemic affecting mental health, cognitive function, energy levels, and overall quality of life. This bulletin shares high-impact observations from clinical practice to help guide GPs and psychiatrists in recognising and treating iron deficiency earlier.

Red Flag Symptoms — Think Iron Deficiency

Symptom / Sign	Clinical Insight
Tiredness / Fatigue	Most common presenting symptom
Headaches / Dizziness	Common in younger females, 45% of migraine sufferers has low iron
Depression / Anxiety	Often masks underlying iron deficiency
Restless Legs	Strong diagnostic clue — rarely without iron deficiency
Cognitive issues in older adults	Memory loss, confusion, poor focus
Pica (soil eating/ice/unusual cravings)	Ask directly — often under-reported, esp. in rural areas

How to Diagnose Iron Deficiency (Even if the Lab Says "Normal")

Don't rely on the lab's reference range. Many labs still use outdated thresholds. Use these cut-offs instead:

Ferritin	Diagnosis
<30 µg/L	= Iron deficiency — regardless of other values
30–100 with **transferrin sats<20 %**	= Iron deficiency
In reduced ejection fraction heart failure **ferritin < 299** with **transferrin sats<20%**	= Iron deficiency *(new guidelines)*
In chronic kidney disease **ferritin < 100** or **ferritin 100–300** with **transferrin saturation<20%**	= Iron deficiency

Most patients with fatigue, headaches, or psychiatric symptoms have low ferritin, even without anemia.
NB: For most reliable serum iron and transferrin saturation **draw fasting in the morning**

Iron Deficiency Without Anemia Still Wreaks Havoc

Iron deficiency can cause significant symptoms — even before anemia develops. Why? Because in early deficiency, the bone marrow hoards iron for red cell production, leaving the brain starved. The result: a patient who looks fine on Hb but wakes up every day below baseline.

Ferritin Interpretation Mnemonic

"Ferritin under 30? You're late. 30 to 100? Investigate. Over 100? Still correlate."

Can a normal Hb hide iron deficiency? Absolutely. It's common. Check ferritin + saturation.

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Too Little In or Too Much Out?

Too Little In	Too Much Out
Low red meat/vegetable intake	Heavy menstrual bleeding (esp. young women)
Poverty-related undernutrition	GI blood loss (ulcers, malignancy, older adults)
Papaya/spinach misconceptions	Frequent blood donation, NSAID use, aspirin (micro-bleeds)

Treatment Pearls

- Regardless of the presence of symptoms, all patients with iron deficiency anemia and most patients with iron deficiency without anemia should be treated, typically to raise the ferritin to at least 50 ng/ml
- Remind patients not to stop therapy just because they feel better. Iron stores take months to recover, and stopping too soon almost always leads to relapse

Treatment Pearls: Oral Iron

- For most patients, **oral iron** is the default starting point unless clear reasons exist for Intravenous
- Blood transfusion if Hb < 7 g/dl or if the patients is shocked or actively bleeding
- Start oral iron: e.g. ferrous sulfate 200 mg once daily or alternate days
  New: Sideral, Ferrimed daily, can use alternate days if the patient doesn't absorb or tolerate well
  New: Quadrofer 2 sachets/day for Hb 9-11 for active treatment. 1 sachet per day for maintenance.
  Sideral forte can be used for active treatment: Hb 7-9: 8 capsules/day x 1 week, then 4 capsules/day thereafter. Hb 9-11: Sideral forte 4 capsules/day. Hb 11-12 1-2 capsules/day

Treatment Pearls: Intravenous Iron

- **IVI iron** is preferred as first line therapy instead of oral iron when:
  - Iron deficiency in heart failure ferritin < 299 with transferrin saturation < 20 %
  - Chronic kidney disease especially if on dialysis
  - Poor GIT absorption e.g. inflammatory bowel disease, post-gastrectomy or prior bariatric surgery
  - Severe iron deficiency with urgent need for rapid repletion
    - pre-operative optimization
    - pregnancy (2^{nd}/3^{rd} trimester) when oral iron is inadequate or not tolerated
    - severe symptomatic anemia where blood transfusion is to be avoided
  - Intolerance or failure of oral iron
    - severe GIT symptoms (constipation, nausea, pain)
    - non-response to adequate trial of oral therapy after 3 months
- Reassess after 3 months: if ferritin remains low → consider IV iron
- Deworm where relevant: Vermox (mebendazole) 100 mg BD x 3 days or Albendazole 400 mg single dose
- Refer to gynecology if menorrhagia suspected
- NB If Hb is < 12 before elective surgery, check and treat iron deficiency to prevent post op blood TF and wound complications.
- In chronic kidney failure aim for Hb 10-11.5; ferritin 300-500 and transferrin saturation 20 – 30 %. Start iron supplement in chronic renal failure if ferritin < 100 or ferritin 100 – 300 with transferrin saturation < 20 %

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Frequent Blood Donors: Silent Risk

Many frequent donors believe they're healthy because their Hb passes — but ferritin is often low. Always ask: 'Do you donate blood regularly?' and check ferritin if yes.

Iron Deficiency in Pregnancy: A Critical Window

If you don't correct iron deficiency before delivery, the damage may be lifelong.

The baby is at increased risk of:

- Poor neurodevelopment; including learning difficulties, ADHD,
- Possible association with conditions such as autism spectrum disorders and schizophrenia
- Growth failure, learning & emotional problems

And for the mother: postpartum depression, preterm labor, exhaustion, infections

Treat iron deficiency aggressively in pregnancy — you're treating two lives.

Final Word from the Specialist

We are deeply passionate about this. Iron deficiency is under-recognized, under-treated, and deeply impactful. Patients wake up far before their full potential — tired, foggy, emotionally flat**. If we treat it properly, we give them back their lives.** Iron deficiency is silent, but its consequences are loud – in our classrooms, our workplaces and our homes. Recognizing and treating it early is not only personal medicine, it's public health.

Academic & Clinical Notes

"Clinicians often underestimate the symptoms of iron deficiency and overestimate their ability to detect it clinically and HFrEF can be treated with iron supplementation if transferrin saturation is < 20 % (provided it is fasting and pt didn't take iron supplement on day of test)"
— Prof Vernon Louw, University of Stellenbosch

"Iron deficiency in pregnancy is linked to long-term cognitive, behavioral, and psychiatric outcomes in the child — including ADHD, autism spectrum disorders, and lower academic performance."
— World Health Organization, 2020

When to Refer

Refer to a specialist if:

- Ferritin is borderline and patient is symptomatic
- Iron studies are confusing or don't match the clinical picture
- Oral iron is not tolerated or ineffective
- IV iron is indicated
- The patient is pregnant and severely iron deficient
- There's a need to investigate possible blood loss or malabsorption

With Thanks

Drs Sanelle and Freek, Specialist Physicians, with deep appreciation for the work our GPs and colleagues do daily

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